

**REMARKS**

The Examiner's final Action of November 7, 2003 has been received and its contents carefully considered. Reconsideration is respectfully requested in view of the amendments and the following comments.

Claims 1, 4 and 7 are currently pending. Claims 2, 3, 5 and 6 have been cancelled. New claim 7 has been added. Entry of the above amendments is respectfully requested as they do not introduce any new issues for consideration by the Examiner.

**Amendments to the Claims**

Claims 2, 3, 5 and 6 have been cancelled. The subject matter of claims 2 and 3 has been incorporated into independent claim 1. New claim 7 is supported by the original specification, for example at page 11, lines 23-24 and in Figs. 1 and 4-9. It is submitted that the above amendments do not introduce new issues for consideration by the Examiner. The subject matter of new claim 7 is clearly depicted in the original drawings, and should therefore already have been searched.

**Rejection under 35 USC 102(b)**

Claims 1-6 have been rejected under 35 USC 102(b) as being anticipated by Krause et al. Reconsideration is respectfully requested in view of the amendments and the following comments.

Claim 1 of the application recites disposing a plurality of laser diode arrays in a direction of a width of a part to be processed in such a manner as to allow radiation of laser beams in the direction of the width of the part to be processed and controlling each of the laser diode and shaping the laser beams such that laser beams in which the part to be processed is irradiated in its widthwise marginal portions exhibit a higher intensity than laser beams with which the part to be processed is irradiated in its widthwise central portion.

Advantageously, according to the present invention as recited in independent claim 1, the part to be processed can be heated and processed uniformly in its widthwise direction (see specification at page 19, lines 18-28), and, in case where the processed part is cladding material, a smooth cladding layer may be formed (see specification at page 12, line 7 from the bottom to page 14, line 8 from the bottom, and Fig. 6). Furthermore, advantageously, where the part must be hardened, the hardening occurs uniformly without any penetration problems (see specification at page 16, lines 20-27, and Figs. 7-9).

Krause et al., on the other hand, does not disclose either irradiation in a widthwise direction, or irradiation at marginal portions exhibiting a higher intensity than at the central portion. Krause et al. in fact disclose a laser diode array device in which laser diode arrays are stacked in a vertical direction (thickness direction of the member to be processed) one on top of the other. That is, the laser diode arrays are not disposed in a widthwise direction of the member to be processed, as required by the claims of the present application, nor is each of the laser diode arrays controlled in accordance with a width direction of the member to be processed.

The office action interprets Krause et al. as teaching the distribution of energy as being changed by controlling each of the laser diode arrays and shaping the laser beams such that laser beams with which the part to be processed is irradiated in its widthwise marginal portions exhibit a higher intensity than laser beams with which the part to be processed is irradiated in its widthwise central portion. However, it is respectfully noted that the interpretation of Krause et al. set forth in the office action is inaccurate. Item 36 in Figure 11a in Krause et al. merely shows the energy distribution in the Z direction (that is, in the direction of thickness, as seen in Fig. 1) of the laser diode, and, as set forth above, does not show the energy distribution in the widthwise direction of a part to be processed.

In view of the above, it is submitted that independent claims 1 is patentable over Krause et al.. In addition, it is submitted that dependent claims 4 and 7 are both patentable over Krause et al. by virtue of being dependent from independent claim 1, and further for the

**PATENT APPLICATION**

**Serial No. 10/089,443**

**Docket No.: 12412/1**

particular additional features that they recite.

Accordingly, the Examiner is respectfully requested to reconsider and withdraw his rejection of the claims under Section 102(b) in view of Krause et al.

CONCLUSION


In view of the foregoing amendments and remarks, it is respectfully submitted that the presently pending claims are in condition for allowance. The Applicant therefore earnestly solicits issuance of a Notice of Allowance.

The Examiner is invited to contact the undersigned at (202) 220-4296 to discuss any matter concerning this application.

No additional fees are believed to be required in connection with this submission. Nonetheless, the Applicants authorize payment of any additional fees under 37 C.F.R. § 1.16 or § 1.17 or credit of any overpayment to Deposit Account No. 11-0600.

Respectfully submitted,

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